Transport for NSW

WST22/00212/01 | SF2022/239748

Energy Assessments
Department of Planning & Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Attention: Kurtis Wathen

17 March 2023

SSD-50629707: Request for Secretary's Environmental Assessment Requirements (SEARs) for The Plains Wind Farm - Request for input into the Secretary's Environmental Assessment Requirements (SEARs) for Hay Shire Council

Dear Kurtis,

Thank you for referring the abovementioned request for SEARs via the NSW Major Projects Planning Portal on 17th November 2022 inviting comment from Transport for NSW (TfNSW).

TfNSW has reviewed the Scoping Report, prepared by Engie, dated 10th November 2022 prepared for the proposed Plains Wind Farm development as part of The Plains Renewable Energy Park. The Wind Farm proposes the following components:

- Up to 226 wind turbines with a total capacity of up to approximately 1800 MW, the wind turbines will have a maximum hub height of 180m and tip height of up to 280m;
- One operations and maintenance building
- One primary 330 kV substation including a control room and switchyard to facilitate connection to the National Electricity Market (NEM). Includes transformers, voltage controls, storage units and potentially power quality controls;
- At least two 132 kV collector substations including a control room within each, located at selected locations within the wind farm. Collector groups will be connected with predominately 33kV underground cabling;
- Up to six permanent Meteorological Masts;
- High-voltage overhead lines connecting collector groups, main substation and connection to the NEM infrastructure;
- A construction compound and temporary construction infrastructure including concrete batching facilities;
- Electrical connections between wind turbines and site substations. The grid (a tee-connection within the Project Boundary is assumed), which will primarily be underground though may include overhead lines;
- Internal access tracks and upgrades to existing access roads where required;

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- Upgrades to existing minor roads along the haulage route to the Project Area;
- Wind turbine hardstands;
- Installing maintenance and environmental managements processes and equipment;
- On-site quarries, security fencing and landscaping;
- Ancillary activities including gravel pits, water sourcing, visual screening (as required); and
- Temporary workers accommodation.

The Plains Renewable Energy Park also includes a proposed solar farm and battery energy storage system which is subject to a separate SSD application, however the subject proposal may share some of the infrastructure proposed for the solar farm.

TfNSW key interests are the safety and efficiency of the transport network, the needs of our customers and the integration of land use and transport in accordance with the *Future Transport Strategy 2056*.

To ensure that TfNSW's key interests are addressed, TfNSW requests that any future application be submitted with an Environmental Impact Assessment (EIA) containing a Traffic Impact Assessment (TIA), prepared by a suitably qualified person/s in accordance with the Austroads Guide to Traffic Management Part 12, Australian Standards and any complementary TfNSW Supplements, and *Roads and Maritime Guide to Traffic Generating Developments*. The TIA should contain information listed in Attachment A: Traffic Impact Assessment (TIA).

In addition to the requested TIA, due to the significant scope of the transport logistics for OSOM transit, a concept-level route analysis is required to be provided with the SSD application based on high-level 3D swept path analysis to generally indicate locations where civil works are likely to be required. The route analysis is to include at a minimum the following:

- Identify the OSOM route to be utilised and any indicative pinch points within the network vertically, horizontally and laterally and the potential civil works required to accommodate the OSOM vehicles.
- The logistics assessment is to highlight each at-risk road structures that the haulage route crosses including bridges, traffic signals, signage, major culverts, and minor culverts that may not meet the desirable cover to cater for proposed axle loads.
- Pull-over bay locations for the design vehicle or identification of any long haulage segments of the route where overtaking cannot be achieved.
- The design vehicle templates used with the swept path analysis software are also requested in order for TfNSW to review the performance within the software (e.g. Autodesk Vehicle Tracking or Transoft AutoTURN).
- Provide the following measurements parameters of the OSOM components / materials to be moved:
  - Identify all the types of OSOM vehicles proposed to be used for the project.
  - Overall combination length, width, height and mass
  - Maximum component length (e.g. blade length, blade overhang length, etc.)
  - Maximum component widths (e.g. turbine tower, battery component, pipes, etc.)
  - Maximum load heights (clearance to overhead obstructions such as structures, utilities and vegetation),
  - Wheelbase dimensions,
  - Maximum trailer articulation angle(s),
  - Minimum overhang heights above the road surface,
  - Axle loads and axle group loads in terms of both tonnes and Equivalent Standard Axles (refer to Austroads Guide to Pavement Technology).

- Provide GPS coordinates of the route and pinch points.

TfNSW encourages early discussions with proponents regarding the traffic and network matters associated with State Significant Development. If you wish to discuss this matter further, please contact the undersigned on 02 9983 2372.

On determination of this matter, please forward a copy of the final SEARs to TfNSW at development.west@transport.nsw.gov.au.

Yours faithfully,

Alexandra Power
Team Leader Development Services (Renewable Resources)
West Region | Community and Place
Regional and Outer Metropolitan

Attachment A: Traffic Impact Assessment (TIA)

The purpose of the TIA is to address the impact of traffic generation on the public road network and measures employed to ensure traffic efficiency and road safety during construction, operation and decommissioning of the project.

The requested TIA should be tailored to the scope of the proposed development and include, but not be limited to, the following:

- Detailed plans identifying the proposed location of any:
  - Project-related infrastructure within and outside of the project boundary.
  - Transmission line infrastructure, or any other project-related structures, within a road reserve. Include demarcation of local and classified road reserves.
  - Permanent or temporary connection/access to classified roads.
  - Structures on the road network that could be sensitive to blasting (e.g. bridges, pump stations, etc.). Note, if any structures are likely to be affected, an assessment of the impact must ensure that the peak particle velocity is limited to an acceptable level to TfNSW.
  - The Scoping Report identifies that ancillary infrastructure and temporary facilities are to be provided on-site including (but not limited to) concrete batching facilities and temporary workers accommodation. The TIA should identify:
    - **Concrete batching facility** - The source for input materials and quantify the traffic generation associated with the haulage of the source materials. Where the location of source materials is not yet known, worst case scenarios for traffic distribution of those materials to and from the development site are to be addressed.
    - **Accommodation** - Details of the accommodation, including but not limited to the maximum accommodation capacity, the work schedules relevant to staff turn over at the camp, the transport options available (Light Vehicles, Shuttle Buses, carpooling etc) and traffic generation volumes of workers arriving / departing the camp, any staff pick up locations external to the project site, peak shift change / staff turn over details, any services required to support the accommodation camp and what traffic will those support services will generate.
- Cumulative impacts:
  - Identify and assess the implications of any road and rail projects that will potentially be occurring simultaneously with the scheduling of the OSOM movements along the proposed OSOM routes.
  - An assessment should be undertaken as a part of the EIS and TIA to identify the projects that will have overlapping construction periods and assess the cumulative traffic impacts with emphasis on the following:
    - The cumulative impacts from traffic generated from the construction workforces in terms of the origin-destination routes, access, AM/PM peaks where there is overlap with other projects.
    - The cumulative impacts of heavy vehicle movements in terms of AM/PM peaks and routes where there is an overlap with other projects.
    - Cumulative impacts and consideration in relation to the timing of movements of OSOMs where other projects will be utilising the same routes as proposed for this development.
    - The Plains Renewable Energy Park also includes a proposed solar farm and battery energy storage system which is subject to a separate SSD application, however the subject proposal may share some of the infrastructure proposed for the solar farm and should consider each other in relation to timing and staging of each project within the TIA assessment(s) of each project.

- Heavy vehicle and OSOM routes:
  - Identify the return routes for OSOMs.
  - National Heavy Vehicle Regulator (NHVR) approved routes identified on the Restricted Access Maps (RAV MAP) are to be utilised for the heavy vehicle routes for the proposed development.
  - The TIA is required to include details on the number of OSOM movements, the intended time for OSOM movements to occur and identify the location of pull-over bays / rest areas along the OSOM routes.
- Project schedule:
  - Hours and days of work, number of shifts and start and end times,
  - Phases and stages of the project, including construction, operation and decommissioning.
- Traffic volumes including:
  - Existing background traffic,
  - Project-related traffic for each phase or stage of the project,
  - Projected cumulative traffic at commencement of operation, and a 10-year horizon post-commencement.
- Traffic characteristics including:
  - Number and ratio of heavy vehicles to light vehicles,
  - Peak times for existing traffic,
  - Peak times for project-related traffic including commuter periods,
  - Proposed hours for transportation and haulage,
  - Interactions between existing and project-related traffic.
- The origins, destinations and routes for:
  - Commuter (employee and contractor) light vehicles and pool vehicles,
  - Heavy (haulage) vehicles,
  - OSOM vehicles.
- Identify the necessary road network infrastructure and access upgrades required to cater for and mitigate the impact of project related traffic on both the local and classified road network for the development (for instance, road widening, hardstand areas, pullover bays, site access upgrades, intersection treatments etc).

  In this regard, a strategic design drawing/s should be submitted with the SSD application for any identified road infrastructure and access upgrades. It should be noted that any identified road infrastructure upgrades will need to be to the satisfaction of TfNSW and Council. Works must be appropriately designed in accordance with *Austroads Guide to Road Design* for the existing posted speed limit, including provision of Safe Intersection Sight Distance (SISD).

  Note: The design needs to comply with *TfNSW Strategic design requirements for DAs*. To assist you in preparing the designs, please refer to the link: https://roads-waterways.transport.nsw.gov.au/business-industry/partners-suppliers/documents/planningprinciples/strategic-design-fact-sheet-02-2022.pdf
- Road safety assessment of key haulage route/s:
  - Where road safety concerns are identified at a specific location along the proposed haulage routes, TfNSW suggests that the TIA be supported by a targeted Road Safety Audit undertaken by suitably qualified persons in accordance with the *Austroads Guidelines.*

- A review of crash data along the identified transport route/s for the most recent 5 year reporting period and an assessment of road safety along the proposed transport route/s considering the safe systems principles adopted under Future Transport 2056.
- Consideration of the local climate conditions that may affect road safety during the life of the project (e.g. fog, wet and dry weather, icy road conditions).
- The layout of the internal road network, parking facilities and infrastructure.
- Impact on rail corridors and level crossings detailing any proposed interface treatments. Note, the rail authority for rail corridors in the vicinity of the site and likely OSOM route is ARTC.
- Impact on public transport (public and school bus routes) and consideration for alternative transport modes such as carpooling and shuttle buses during construction.
- Identification and assessment of potential environmental impacts of the project, such as blasting, lighting, visual, noise, dust and drainage on the function and integrity of all affected public roads.
- Controls for transport and use of any dangerous goods in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*, the *Australian Dangerous Goods Code* and *AS4452 Storage and Handling of Toxic Substances*.
- A draft Traffic Management Plan (TMP) that could be implemented following approval of the EIS, in consultation with relevant Councils and TfNSW. The TMP is to address the construction, operation and decommission phases of the proposed development and be prepared and implemented in accordance with *Australian Standard 1742.3* and the *Work Health and Safety Regulation 2017*.